

In The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A data packet processing device for processing data packets received from a network, including comprising:

a processor device for processing data packets;

a memory manager device for initially receiving packets from said network and preloading received data packets to an internal memory coupled therewith. said internal memory for storing packets to be processed by said processor;

an external memory for storing further packets to be processed by said processor;

an interface between said memory manager and said external memory operable for transmitting data packets to and from [[an]] said external memory;

said memory manager in communication with a scheduler for assigning priority information to each data packet initially received from said network to be pre-loaded to said internal memory which determines an order of the data packets to be processed to each received data packet ~~in the external memory~~, and storing links to the data packets in a pointer memory for processing by said processor device in said priority order,

an internal memory for storing data packets;

wherein packets with a highest priority that is to be processed and a data packet that is to be processed next are pre-loaded in said internal memory and data

packets with lower priorities are transferred from said internal memory for storage in said external memory via said interface; and

[[a]] said memory manager receiving priority information from said scheduler
and coupled to the external memory and the internal memory operable to transfer the data packet having the highest priority stored in the external memory to the internal memory to be processed by said processor as one of the next;

wherein the memory manger is operable to transfer a data packet ~~from~~ between
the internal memory [[to]] and the external memory via said interface.

2. (Cancelled)

3. (Previously Presented) A data packet processing device according to claim 1, wherein depending on the priority information assigned to a data packet, and the packet's stored link in the pointer memory, the memory manager transmits the data packet from the internal memory to the external memory.

4. (Previously Presented) A data packet processing device according to claim 1, wherein the memory manager means keeps a data packet stored in the internal memory if the priority information assigned to the data packet, and the packet's stored link in the pointer memory, indicates a high priority, and transmits the data packet to the external memory if the priority information assigned to the data packet, and the packet's stored link in the pointer memory, indicates a low priority.

5. (Previously Presented) A data packet processing device according to claim 4, wherein the internal memory has a size to store a number x of data packets to be processed next, wherein the priority of a data packet is high if the assigned priority information, and the packet's stored link in the pointer memory, indicates that the data packet is within the next $x-1$ ones to be processed and/or wherein the priority of the data packet is low if the assigned priority information, and the packet's stored link in the pointer memory, indicates that the data packet is not within the next $x-1$ ones to be processed.

6. – 15. (Cancelled)

16. (Currently Amended) A method for processing data packets, said method comprising:

~~receiving, at a data packet processing device, the data packets from a network;~~

~~storing, under control of a memory manager device, the received data packets in an external internal memory of said data packet processing device;~~

~~determining, by a scheduler associated with said memory manager device, a priority of the received data packets and assigning priority information to each of the data packets,[[;]] wherein packets with a highest priority that is to be processed and a data packet that is to be processed next are pre-loaded in said internal memory and data packets with lower priorities are transferred from said internal memory for storage to a memory device external to said data processing device via an interface; and,~~

~~transferring at least one of the packets having the highest priority to an internal memory for storage and processing as one of the next data packets;~~

~~transferring a data packet from the internal memory to the external memory if~~

~~the priority information indicates that the priority of the data packet is not high; and~~

storing a pointer link to the data packet in a pointer memory to facilitate processing in the data packet's assigned priority order, and,

receiving, at said memory manager, priority information from said scheduler, said memory manager device coupled to the external memory and the internal memory operable for transferring the data packet having the highest priority stored in the external memory to the internal memory to be processed by said processor as one of the next.

17. (Previously Presented) A method as recited in claim 16, further comprising checking if a next packet is received having a high priority; if the next packet is received having a high priority, repeating the steps of storing and determining for the next packet; and if the next data packet is not received, waiting until the next data packet is received and repeating the step of checking.

18. (Currently Amended) An article of manufacture comprising a tangible computer storage medium readable by a computer and storing instructions for execution by the computer for processing data packets in accordance with a method comprising steps of:

receiving, at a data packet processing device, the data packets from a network;

storing, under control of a memory manager device, the received data packets in an ~~external~~ internal memory of said data packet processing device;

determining, by a scheduler associated with said memory manager device, a priority of the received data packet and assigning priority information to each of the data packets,[[;]] wherein packets with a highest priority that is to be processed and a data

packet that is to be processed next are pre-loaded in said internal memory and data packets with lower priorities are transferred from said internal memory for storage to a memory device external to said data processing device via an interface;

~~transferring at least one of the packets having the highest priority to an internal memory for storage and processing as one of the next data packets;~~

~~transferring a data packet from the internal memory to the external memory if the priority information indicates that the priority of the data packet is not high; and~~

~~storing a pointer link to the data packet in a pointer memory to facilitate processing in the data packet's assigned priority order, and,~~

receiving, at said memory manager device, priority information from said scheduler, said memory manager device coupled to the external memory and the internal memory operable for transferring the data packet having the highest priority stored in the external memory to the internal memory to be processed by said processor as one of the next.

19. (Currently Amended) A program storage device comprising a tangible storage medium readable by a computer and storing a set of computer readable instructions for execution by the computer for processing data packets in accordance with a method of:

receiving, at a data packet processing device, the data packets from a network;

storing, under control of a memory manager device, the received data packets in an internal external-memory of said data packet processing device;

determining, by a scheduler associated with said memory manager device, a

priority of the received data packet and assigning priority information to each of the data packets, wherein packets with a highest priority that is to be processed and a data packet that is to be processed next are pre-loaded in said internal memory and data packets with lower priorities are transferred from said internal memory for storage to a memory device external to said data processing device via an interface; and,

~~transferring at least one of the packets having the highest priority to an internal memory for storage and processing as one of the next data packets;~~

~~transferring a data packet from the external memory to the external memory if the priority information indicates that the priority of the data packet is not high; and~~

storing a pointer link to the data packet in a pointer memory to facilitate processing in the data packet's assigned priority order, and,

receiving, at said memory manager device, priority information from said scheduler, said memory manager device coupled to the external memory and the internal memory operable for transferring the data packet having the highest priority stored in the external memory to the internal memory to be processed by said processor as one of the next.